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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/743,537      | 01/11/2001  | Noureddine Khelifa   | 1948-4745           | 5731             |

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EXAMINER

FORD, JOHN K

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 05/20/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

|                       |                 |              |  |
|-----------------------|-----------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) |  |
|                       | 09/743 537      | Khelifa      |  |
|                       | Examiner        | Art Unit     |  |
|                       | FORD            | 3743         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4-23-03
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-8, 10-12 is/are pending in the application.
- 4a) Of the above claim(s) 3, 6, 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 9 and 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1,4,5 and 8 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With regard to elected Figure 2 there is no disclosure in the original specification drawing Figures or the original claims to support the recited order of components in claim 1. Applicant addresses no comments to this issue in his remarks. The Examiner has reread the specification and is at a loss to see where these components are disclosed in the claimed order in elected Figure 2 (as shown). There is no suggestion in the disclosure with regard to Figure 2 that the evaporator 22 and condenser 32 are downstream of coolant heater 12. At best there is some sort of parallel or separate disposition as disclosed on page 9, line 34 – page 10, line 6.

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In regard to elected Figure 2 (as shown) there is only one three-way valve 35 shown. Claim 12 does not appear to be readable on the elected species. Either

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designate it as non-elected or amend it to be descriptive of the elected species in response to this rejection.

The claims are highly functional in nature:

Claim 1, in particular, recites extremely little structure and a host of functional recitations. For example, "a first fluid circuit" and "a first heat exchanger" (both structure) are recited in claim 1, paragraph 1. The remainder of the clause is functional, i.e. "warming an air flow by transferring heat from the engine". The engine isn't positively recited nor is any structure to produce warming in the positively claimed heat exchanger recited. MPEP 2114 is clear in stating that an apparatus must be distinguished from the prior art by what it is not what it does. In amending these claims recite structure, not function, to define over the art. In claims 1 and 10, essential elements (condenser, expansion valve etc.) are missing to make the "cooling heat exchanger" operate as a cooler.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1,4,5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2-41917 (Figures 1 or 2).

JP '917 shows all of the recited structure much of which is recited in claims 4 and 5 with a peculiar amount of imprecision, enough broadly recited imprecision to conclude that JP'917 fairly discloses the claimed subject matter.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,4,5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of JP 2-41917 and Enomoto (USP 5,291,941) Figure 8.

JP '917 is discussed above and the Abstract of that reference is incorporated here by reference. To have arranged condenser 37, evaporator 36 and heater 301 discussed in Enomoto et al. with regard to Figure 8 in the manner suggest by JP '917 (liquid heater 41, evaporator 52 and condenser 51) with respect to the air flow would have been obvious to avoid the leakage problems discussed in the Abstract of JP '917.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Enomoto (USP 5,291,941) Figure 8. As disclosed in col. 5, lines 48-55, the Figure 8 embodiment of Enomoto uses a separate cooling heat exchanger 36 and heating heat exchanger 37 which are used in place of heat exchanger 14 in the other embodiments. A coolant-based heater 301 (not shown in Figure 8) is located proximate to heat exchanger 14 in Figure 1 and hence would be proximate heat exchangers 36 and 37 in the Figure 8 embodiment of Enomoto. Valves 181 and 182 permit flow from the compressor to be directed to either of heat exchangers 36 or 37. If both valves 181 and 182 are open then flow would go to both heat exchangers 36 and 37. While Enomoto, admittedly, does not explicitly teach opening both valves 181 and 182 simultaneously, it is of no moment in claims drawn to an apparatus. It is well established that in a claim drawn to apparatus, a new mode of operating the apparatus does not impart patentability to the apparatus itself. See MPEP 2114.

Regarding claim 11, Enomoto explicitly teaches valves 181 and 182 can be replaced by a three – way valve in column 6, lines 1-2. Again, the manner of operating the device does not impart patentability to the device itself.

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Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enomoto (Fig. 8) as applied to claims 10 and 11 above, and further in view of Volk et al. (USP 3,421,339).

Figure 2 of Volk et al. teaches operating a device similar to that shown in Enomoto (Figure 8) as either a cooler, heater, or simultaneously as a cooler and heater ("compensating mode"). To have operated valves 181 and 182 (or the three way valve substituted for valves 181 and 182 in Enomoto) to either heat, cool, or to be both open to heat and cool simultaneously would have been obvious from the teaching of Volk et al.


Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of the prior art as applied to claims 10 and 11 above, and further in view of Halls (USP 3,213,637, Fig 2) or Ellenberger (USP 2,776,543) or Wheeler (USP 2,769,314)

Each of these references teaches 3-way valves at both the discharge and suction sides of a refrigeration compressor to feed and return refrigerant from two separate circuits. To have used 3-way valves at both the inlet and outlet connections to the compressor in Figure 8 of Enomoto to permit operation even when one circuit was leaking would have been obvious to one of ordinary skill in the art.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to John Ford at telephone number 703-308-2636.



**John K. Ford**  
**Primary Examiner**